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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicant:	Amr M. Mohsen		
Assignee:	Aptix Corporation		
Title:	FIELD PROGRAMMABLE PRINTED CIRCUIT BOARD		
Serial No.:	08/632,298	Filed:	April 12, 1996
Examiner:	V. Trans	Group Art Unit:	2763
Docket No.:	M-1007-6C US		

San Jose, California
July 16, 1998

COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D. C. 20231

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JUL 17 1998
Group 2700

AMENDMENT

Sir:

Please amend the above patent application as follows:

IN THE CLAIMS

Rewrite Claims 29, 37, 40, 42, and 57 as follows:

--29. (Twice amended) Structure comprising:

a board suitable for carrying electrically conductive traces;

a plurality of component contacts formed on said board for receipt of electronic components;

a plurality of electrically conductive traces formed on said board, each of said conductive traces being electrically connected to a corresponding one of said component contacts;

at least one programmable integrated circuit connected to said board and containing a plurality of electrically conductive leads, each of said conductive leads being electrically connected to a corresponding one of said conductive traces on said board thereby

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to form an electrically conductive path from each component contact to the corresponding conductive lead, said at least one programmable integrated circuit being programmable [by a user through said conductive leads] to selectively interconnect said conductive traces [on said board] through said conductive leads to achieve a desired electrical function from the electronic components to be connected to said board; and

at least one bus for transmitting information between a computer and said at least one programmable integrated circuit.

10 37. (Twice amended) Structure comprising:

a board suitable for carrying electrically conductive traces;

a plurality of component contacts formed on said board for receipt of electronic components;

a plurality of electrically conductive traces formed on said board, each of said conductive traces being electrically connected to a corresponding one of said component contacts; and

at least one programmable integrated circuit connected to said board, each programmable integrated circuit comprising:

a substrate;

a first set of electrically conductive leads formed across said substrate in a first direction;

a second set of electrically conductive leads formed across said substrate in a second direction not parallel to said first direction, at least one conductive lead in at least one of said first and second sets of conductive leads being divided into at least two electrically separate conductive segments; and

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means for programmably interconnecting selected ones of said conductive leads or segments;

wherein each of a selected number of said conductive leads of said at least one programmable integrated circuit is electrically connected to a corresponding one of said conductive traces on said board thereby to form an electrically conductive path from each component contact to the corresponding conductive lead; and

wherein said at least one programmable integrated circuit is programmable [by a user through said conductive leads] to selectively interconnect said conductive traces [on said board] through said conductive leads to achieve a desired electrical function from the electronic components to be connected to said board.

40. (Twice amended) Structure comprising:

a substrate;

a plurality of component contacts formed on said substrate for receipt of electronic components;

a plurality of electrically conductive traces formed on said substrate, each of said conductive traces being electrically connected to a corresponding one of said component contacts; and

at least one programmable integrated circuit connected to said substrate and containing a plurality of electrically conductive leads, said at least one programmable integrated circuit being programmable [by a user through said conductive leads] to selectively interconnect said conductive traces [on said substrate] through said conductive leads to achieve a desired electrical function from the electronic components to be connected to said substrate;

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[wherein each of said conductive leads of said at least one programmable integrated circuit is electrically connected to a corresponding one of said conductive traces on said substrate thereby to form an electrically conductive path from each component contact to the corresponding conductive lead; and]

wherein said component contacts and said conductive traces on said substrate have a standard configuration independent of the electronic components to be mounted on said substrate and the electrical function to be implemented by said electronic components when selectively interconnected by said at least one programmable integrated circuit.

42. (Twice amended) Structure comprising:

a main substrate;

a plurality of component contacts formed on said main substrate for receipt of electronic components;

a plurality of electrically conductive traces formed on said main substrate, each of said conductive traces being electrically connected to a corresponding one of said component contacts;

at least one programmable integrated circuit connected to said main substrate, each programmable integrated circuit comprising:

a chip substrate;

a first set of electrically conductive leads formed across said chip substrate in a first direction;

a second set of electrically conductive leads formed across said chip substrate in a second direction not parallel to said first direction, at least one conductive lead

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in at least one of said first and second sets of conductive leads being divided into at least two electrically separate conductive segments; and

means for programmably interconnecting selected ones of said conductive leads or segments;

wherein each of a selected number of said conductive leads of said at least one programmable integrated circuit is electrically connected to a corresponding one of said conductive traces on said main substrate thereby to form an electrically conductive path from each component contact to the corresponding conductive lead; and

wherein said at least one programmable integrated circuit is programmable [by a user through said conductive leads] to selectively interconnect said conductive traces [on said main substrate] through said conductive leads to achieve a desired electrical function from the electronic components to be connected to said main substrate.

57. (Twice amended) Structure comprising:

a board suitable for carrying electrically conductive traces;

a plurality of component contacts formed on said board for receipt of electronic components;

a plurality of electrically conductive traces formed on said board, each of said conductive traces being electrically connected to a corresponding one of said component contacts;

at least one programmable integrated circuit connected to said board and containing a plurality of electrically conductive leads, each of said conductive leads being electrically connected to a corresponding one of said conductive traces on said board thereby to form an electrically conductive path from each component contact to the corresponding

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conductive lead, said at least one programmable integrated circuit being programmable [by a user through said conductive leads] to selectively interconnect said conductive traces [on said board] to achieve a desired electrical function from the electronic components to be connected to said board; and

at least one bus for transmitting information between a computer and circuitry on said board.--

REMARKS

Confirming what was discussed with the Examiner in the video interview on 8 July 1998, independent structure Claims 29, 37, 40, 42, and 57 have been amended to clarify the programmable capabilities of the recited programmable integrated circuits. Independent Claim 40 has also been amended to enter a missing "and" and to eliminate unnecessary language.

Please telephone Applicant's attorney at 408-453-9200, ext. 1371, if there are any questions.

CERTIFICATE OF FACSIMILE

I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office on the date shown below.

Pamela A. Disney

Type or print name of person signing certification

Pamela A. Disney July 16, 1998

Signature Date

Respectfully submitted,

Ronald J. Meetin

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Attorney for Applicant
Reg. No. 29,089

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FACSIMILE MESSAGE TRANSMITTAL FORM
(Prepare in Duplicate)

July 16, 1998

TO: USPTO Fax: (703) 308-9051 or 9052
Group Art Unit: 2763
Attn: Examiner Vincent Trans Tel: (703) 305-9750

FROM: Ronald J. Meetin

Applicant: Amr M. Mohsen
Assignee: Aptix Corporation
Title: FIELD PROGRAMMABLE PRINTED CIRCUIT BOARD
Serial No.: 08/632,298 Filed: April 12, 1996
Examiner: V. Trans Group Art Unit: 2763
Docket No.: M-1007-6C US

Number of Pages: 9 (total) Sent By: Pam Disney

Date Sent: 7/16/98 Time Sent: Pam Disney

Message:
Examiner Vincent Trans,

Enclosed are the following documents:
1. Transmittal Letter (2 pages); and
2. Amendment (6 pages).

Ron Meetin

If you do not receive all pages, please call (408) 453-9200.

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July 16, 1998

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Re:
Applicant:	Amr M. Mohsen		
Assignee:	Aptix Corporation		
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Docket No.:	M-1007-6C US		

Sir:

Transmitted herewith are the following documents in the above-identified application:

(1) Amendment (6 pages);
(2) this transmittal sheet (in triplicate).

☒ No additional fee is required.
☐ The fee has been calculated as shown below:

CLAIMS AS AMENDED

	Claims Remaining After Amendment		Highest No. Previously Paid For		Present Extra		Rate	Additional Fee
Total Claims	58	Minus	58	=	0	x	$22	$ 0.00
Independent Claims	12	Minus	12	=	0	x	$82	$ 0.00
☐ Fee of $270 for the first filing of one or more multiple dependent claims per application								$ 0.00
Total additional fee for this Amendment:								$ 0.00

☐ Fee for Request for Extension of Time (months) $ 0.00

☒ Conditional Petition for Extension of Time: If an extension of time is required for timely filing of the enclosed document(s) after all papers filed with this transmittal have been considered, an extension of time is hereby requested.

☐ Please charge our Deposit Account No. 19-2386 in the amount of $ 0.00

☒ Also, charge any additional fees required and credit any overpayment to our Deposit Account No. 19-2386.

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Type or print name of person signing certification

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Signature Date

Respectfully submitted,

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